

**REMARKS**

Applicant respectfully requests reconsideration of the application in view of the above amendments and remarks below. Applicant has provided for the Examiner's convenience a current clean copy of the pending claims in Appendix A .

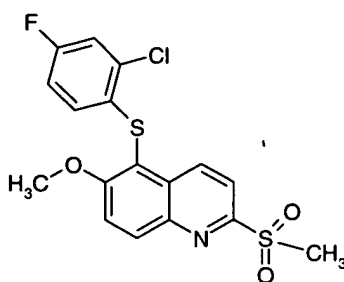
Attached hereto is a marked-up version of the changes made to the claims by the current amendment, captioned "**Version with markings to show changes made**".

**Election/Restriction**

The Examiner requires restriction to one of four groups of inventions under 35 USC § 121. In each of the Groups, the variables  $R^2$ ,  $R^3$ ,  $R^{12}$ , and A are similarly defined; however, distinctions are made with respect to selections for the group  $R^1$ . Thus, applicant understands the restriction requirement is based on selections for  $R^1$ .

The Examiner further requests election of a particular species pursuant to 35 USC § 121.

In response to the Office Action, Applicant elects the species of compound **105**, Example 1, having the formula:



Applicant understands this is a provisional election of a species for the purposes of search and examination only, and if the no art is found with respect to this elected species, the search and examination will be extended to include other non-elected species within the scope of the generic claim.

With regard to the restriction requirement, applicant makes a number of initial observations. First, the Office Action places in Group II compounds where  $R^1$  is selected from "cycloalkyl, hydroxy, hydroxyalkyloxy, haloalkyloxy." Alkoxy is not included in this list or in

any of the lists for Groups I, III, or IV. Most of the examples in the specification describe methoxy as the R<sup>1</sup> group. Thus, it is believed the Office Action had intended to include within Group II compounds where R<sup>1</sup> may be alkoxy.

Applicant further notes that the selections for R<sup>1</sup> of halo and cyano are not included in any of Groups I through IV. However, halo and cyano are recited as preferred selections for R<sup>1</sup> in claims 3, 9, 15, and 21. Applicant requests that the selection of halo and cyano for R<sup>1</sup> be included in Group II, along with alkoxy.

Additionally, each of Groups I through IV recite that A is selected from S, O, S(O), and S(O)<sub>2</sub>. None of Groups I through IV identifies compounds where A is -CH<sub>2</sub>- or -C(=O)-, although many of the Examples herein describe -CH<sub>2</sub>- or -C(=O)- as selections for A. Claims 8 through 19 are included in each of Groups I through IV, and these claims include limitations that A is -CH<sub>2</sub>- or -C(=O)-. Thus, it is understood that the Office Action had intended to include in each of Groups I through IV compounds where A is -CH<sub>2</sub>- or -C(=O)-.

Given the above, Applicant elects with traverse the compounds of Group II, wherein R<sup>1</sup> may include alkoxy, halo or cyano, and A may include -CH<sub>2</sub>- or -C(=O)-. Applicant does not dispute the finding that the compounds falling into the respective groups reflect distinct inventions. However, applicant's traversal is based on the contention that a search and examiner could be performed on the entire claim without serious burden and thus, restriction should not be required pursuant to MPEP §§ 803, 803.02. In particular, § 803 provides:

If the search and examination of an entire application can be made without serious burden, the examiner *must* examine it on the merits, even though it includes claims to independent or distinct inventions [MPEP §§ 803].

Likewise, § 803.02 provides:

If the members of the Markush group are sufficiently few in number or so closely related that a search and examination of the entire claim can be made without serious burden, the examiner must examine all members of the Markush group in the claim on the merits, even though they are directed to independent and distinct inventions [MPEP § 803.02].

Without waiver of the foregoing, claims 1, 3, 9, 15, and 21 have been amended to omit selections for  $R^1$  that are found in Groups I, III, and IV, with the exception of the selection of  $-\text{OSO}_2R^{11}$  for  $R^1$ . Applicant contends that a search and examination can be made on said compounds, together with those compounds where  $R^1$  is hydroxy or alkoxy (OR), without serious burden, given, for example, the common feature of an oxygen atom directly attached to the quinoline core.

New claims 35 and 36 are presented to recite a subgenus of compounds relative to claim 1, directed toward the elected species herein. It is submitted that claims 35 and 36 should be subject to a full search and examination, as the members of the Markush group are sufficiently few in number and/or so closely related that a search and examination of the entire claim can be made without serious burden. Note that the substituents recited for  $R''$  in claim 35 can be found in the specification at p. 4, in the definition of aryl.

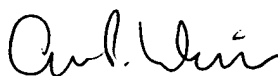
No fees should be due. Although two new claims are added, including one independent claim, two claims have been canceled and the case contains less than three independent claims.

Applicant reserves the right to file one or more divisional/continuation applications directed to the originally presented subject matter.

Conclusion

Applicants respectfully submit that the claims now pending be subject to a full search and examination and that the instant application proceed to issuance.

Respectfully submitted,



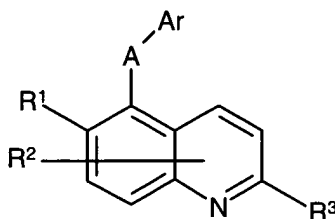
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"Version with markings to show changes made".

1 (Amended). A compound selected from the group of compounds represented by Formula I:



wherein:

A is a  $-\text{CH}_2-$ ,  $\text{CH}(\text{OH})$ ,  $-\text{C}(\text{O})-$ ,  $\text{C}=\text{NOR}^4$ ,  $-\text{NR}^5-$ ,  $-\text{O}-$ ,  $-\text{S}-$ ,  $-\text{S}(\text{O})-$ , or  $-\text{S}(\text{O})_2-$ , where  $\text{R}^4$  is hydrogen or alkyl and  $\text{R}^5$  is hydrogen, alkyl, or acyl;

Ar is an optionally-substituted phenyl;

$\text{R}^1$  is ~~hydrogen, alkyl, alkenyl, alkynyl, haloalkyl, heteroalkyl, cycloalkyl, cycloalkylalkyl, alkoxy, alkenyloxy, cycloalkyloxy, cycloalkylalkyloxy, haloalkyloxy, hydroxyalkyloxy, alkoxyalkyloxy, alkylthio, alkylsulfinyl, alkylsulfonyl, cycloalkylthio, cycloalkylalkylthio, hydroxy, halo, cyano,  $-\text{NR}^9\text{R}^{10}$ ,  $-\text{CONR}^9\text{R}^{10}$ , or  $-\text{OSO}_2\text{R}^{11}$  where  $\text{R}^9$  and  $\text{R}^{10}$  are each independently selected from hydrogen, alkyl, and acyl; and  $\text{R}^{11}$  is selected from alkyl, cycloalkyl, and haloalkyl;~~

$\text{R}^2$  is hydrogen, alkyl, alkenyl, alkoxy, hydroxy, halo, haloalkyl, heteroalkyl, alkylsulfanyl, alkylsulfinyl, alkylsulfonyl, nitro, cyano, or  $-\text{NR}^9\text{R}^{10}$  where  $\text{R}^9$  and  $\text{R}^{10}$  are each independently selected from hydrogen, alkyl, and acyl ~~from the respective group described for  $\text{R}^9$  and  $\text{R}^{10}$  previously;~~ and  $\text{R}^2$  represents substitution at any one of carbons C3, C4, C7 or C8;

$\text{R}^3$  is  $-\text{SR}^{12}$ ,  $\text{SOR}^{12}$ ,  $\text{SO}_2\text{R}^{12}$ , or  $\text{SO}_2\text{NR}^{13}\text{R}^{14}$  wherein,

$R^{12}$  is alkyl, hydroxyalkyl, alkoxyalkyl, aminoalkyl, mono or dialkylaminoalkyl, carboxyalkyl, or alkoxycarbonylalkyl;  
 $R^{13}$  is hydrogen or alkyl, and  
 $R^{14}$  is hydrogen, alkyl, cycloalkyl, cycloalkylalkyl, hydroxyalkyl, alkoxyalkyl, alkoxycarbonylalkyl, aminoalkyl, aryl, or aralkyl; or  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a heterocycloamino group; and  
prodrugs, individual isomers, mixtures of isomers, and pharmaceutically acceptable salts thereof.

3 (Amended). A compound of Claim 2 wherein

$R^1$  is ~~alkyl~~, alkoxy, hydroxy-, halogen or cyano;

$R^2$  is hydrogen or methyl; and

$R^3$  is  $S(O)_{0-2}R^{12}$  where  $R^{12}$  is alkyl.

9 (Amended). A compound of Claim 8 wherein

$R^1$  is ~~alkyl~~, alkoxy, hydroxy-, halogen or cyano;

$R^2$  is hydrogen or methyl; and

$R^3$  is  $S(O)_{0-2}R^{12}$  where  $R^{12}$  is alkyl.

11 (Amended) A compound of Claim 9 wherein Ar is 4-substituted phenyl, ~~or~~ 2-substituted phenyl, or disubstituted phenyl.

15 (Amended) A compound of Claim 14 wherein

$R^1$  is ~~alkyl~~, alkoxy, hydroxy, halogen or cyano;

$R^2$  is hydrogen or methyl; and

$R^3$  is  $S(O)_{0-2}R^{12}$  where  $R^{12}$  is alkyl.

17 (Amended) A compound of Claim 15 wherein Ar is 4-substituted phenyl, ~~or~~ 2-substituted phenyl, or disubstituted phenyl.

22 (Amended) A compound of Claim 20 wherein  
R<sup>1</sup> is ~~alkyl~~, alkoxy, hydroxy, halogen or cyano;  
R<sup>2</sup> is hydrogen or methyl; and  
R<sup>3</sup> is S(O)<sub>0-2</sub>R<sup>12</sup> where R<sup>12</sup> is alkyl.